Conclusion
SBRT to pulmonary metastases of oligo-metastatic NSCLC patients resulted in favorable LC and promising OS. This is the first study showing that histological NSCLC subtype is also an important predictor for LC in SBRT for pulmonary metastases and not only for primary NSCLC tumors. Further prospective studies are needed for evaluating whether treatment paradigms and irradiation doses might have to be adapted depending on different histological subtypes.

PV-0044 Repeat sbrt for pulmonary oligo-metastases
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Purpose or Objective
The majority of patients will develop systemic failure after radical local treatment using stereotactic body radiotherapy (SBRT) for oligo-metastatic disease. However, an oligo-recurrent pattern of disease progression is observed in a relevant proportion of patients, which offers the possibility of repeat radical local treatment. Experiences in repeat SBRT are very limited, which is in particular relevant in oligo-recurrent disease within the same organ due to a potentially increased risk for radiation-induced toxicity. Therefore, it was the aim of this study to evaluate safety and efficacy of repeat SBRT for pulmonary metastases.
Material and Methods
This study was performed on the DEGRO AG Stereotaxy database of 967 SBRT treatments for pulmonary metastases. Patients lost to follow-up within six months after SBRT were removed from the analysis, thus, 559 patients with 753 SBRT treatments were evaluated. One SBRT treatment was defined as all SBRT fractions delivered to one pulmonary target, and all SBRT treatments performed within a one-month interval were defined as one SBRT course. Cox regression model, logistic regression and LASSO (Least Absolute Shrinkage and Selection Operator) method were used to analyze the association between the number of SBRT treatments, number and timing of multiple SBRT courses per patient, overall survival and the risk of early death within 3 and 6 months after SBRT. Follow-up was measured from the start of the last SBRT treatment.
Results
Overall, 127 / 559 patients were treated with SBRT for multiple pulmonary oligo-metastases: 87 patients, 26 patients, 8 patients and 6 patients were treated for 2 metastases, 3 metastases, 4 metastases and >4 metastases, respectively. All metastases were treated within one single SBRT course in 75 patients and repeat SBRT in ≥ 2 courses was performed in 58 patients, maximum 4 SBRT courses. The median interval between the first and second SBRT course was 5.9 – 8.7 months (range 1.8 - 69.0 months). Repeat SBRT was practiced for newly developed oligo-metastases and not as re-irradiation after local failure. No grade 4 or grade 5 toxicity was observed in the cohort of SBRT for multiple lesions and repeat SBRT. After a median follow-up of 15.7 months, median OS was 23.3 months for the entire cohort and OS was not significantly influenced by the overall number of treated metastases or the timing of repeat SBRT. In total, 34 patients (6.1%) and 78 (14.0 %) patients died within 3 months and 6 months after their last SBRT course, respectively: the risk of early death within 3 and 6 months was independent from the number of metastases and the number of SBRT courses.
Conclusion
The overall number of lung metastases and the timing of repeat SBRT did not significantly influence pulmonary toxicity, early death and overall survival. Repeat SBRT for pulmonary metastases should therefore be considered in carefully selected patients with oligo-metastatic disease.

Symposium: Improving radiation therapy in breast cancer by avoiding side effects

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SP-0045 Cost-effective implementation of respiratory control for all!
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Abstract text
This talk will cover the rationale for using breath-holding techniques in radiotherapy for breast cancer, before discussing the available breath-hold techniques and how to implement them, with particular focus on the cost-effective voluntary breath-hold technique. Finally, the talk will discuss the benefits and practicalities of combining breath-hold with more advanced radiotherapy techniques in order to treat the internal mammary chain.